



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/695,497

10/29/2003

Thomas J. Gieseke

82998

8173

7590

08/02/2004

Office Of Counsel, Bldg 112T
Naval Undersea Warfare
Division, Newport
1176 Howell Street
Newport, RI 02841-1708

EXAMINER

RICHARDSON, JOHN A

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,497

Applicant(s)

GIESEKE, THOMAS J.

Examiner

John Richardson

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10-29-2003.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Non Final Rejection

1). The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2). The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3). Claims 1 to 6 are rejected under 35 U.S.C. 102(b) as being anticipated by (U.S.).

The reference discloses fluid flow control devices providing effective turbulence / vortex generation of the boundary layer of a flow surface (Column 1, lines 45+) comprising boundary layer penetrators / vortex generators (items 26) and microelectromechanical system (MEMS) for detecting and controlling fluid flow operation reading on the claimed limitations, sensor measuring means in the form of pressure sensors (items 20), fluid flow effect means (items 18), and a controller means for displacements of the said

Art Unit: 3641

boundary layer positions in the form of the said MEMS technology, relating to claim 2-4,6, the reference discloses an air fluid ejecting means (item 20) and the said sensors (items 20) and fluid flow effect means (items 18), relating to claim 5, the reference discloses the said boundary layer penetrators / vortex generators positioned on a delta shaped wing (item 30) in a manner configured flush with the said wing structure as shown in Figures 3, 4.

4). Claims 7, 8, 12, are rejected under 35 U.S.C. 102(b) as being anticipated by Cohen (U.S. 3,807,274).

The reference discloses an underwater system for launching objects from submersibles that reads on the cited claim limitations comprising an underwater structure (item H) with a launch tube coupled to the said structure (item T), a breach door / muzzle door (item M) configured on the external surface of the said underwater structure providing vortex generators fluid flow streamlining / turbulence control as discussed in Column 1, lines 35-50, system control for positioning the said muzzle door effecting the said turbulence layer (item 50), and pressure sensors (items 120) connected to the underwater vehicle computer system to inform on the conditions of fluid flow at the muzzle door on the outside of the said underwater structure as discussed in Column 15, lines 2-55, relating to claim 8, the reference discloses the said item M ejecting fluid flow as shown in Figure 1.

Art Unit: 3641

5). Claims 7, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sirmalis et al (U.S. 5,964,175) in view of Cohen (U.S. 3,807,274).

The primary reference discloses an underwater launching system that reads on the cited claims except for citing specific vortex shedding means. The secondary reference discloses that it is well known in the fluid flow control art to provide vortex shedding generators. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the Cohen vortex generators (items 26) to the surface of the Sirmulis et al vessel (item 10) for the purposes of making the vessel acoustically quiet (Column 1, lines 47-54) and recognizing that primary reference discusses the effects of vortex shedding (Column 2, lines 64+).

6). Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3641

7). The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8). Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Richardson whose telephone number is (703) 305 0764. The examiner can normally be reached on Monday to Thursday from 7.00 AM to 4.30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306 4198. The fax phone number for the organization where this application or proceeding is assigned is (703) 305 7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 1113.

John Richardson, PE,

July 28 2004.

 3641
JACK KEITH
PRIMARY EXAMINER